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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,497	03/28/2002	Osamu Tajima	020181	2431

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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/088,497	TAJIMA, OSAMU	
	Examiner	Art Unit	
	Jonathan S. Crepeau	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 4 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office action addresses claims 1-4 and 6-10. Claims 3 and 4 remain allowed.

Applicant's amendments have obviated the rejections over Chen and Gyoten. However, claims 1, 2, and 6-10 are newly rejected over Cownden in view of JP '817. Accordingly, this action is made final.

As a further note, the use of single brackets as employed in claim 6 to indicate deletions is no longer proper. See 37 CFR 1.121.

Claim Rejections - 35 USC § 103

2. Claim 1, 2, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cownden et al. (U.S. Patent 6,316,134) in view of JP 6-296817.

Cownden et al. teach a fuel cell system comprising a fuel cell (200) and a water tank (236) (see Figure 2). The water tank supplies water to a further tank (252) disposed in the air supply stream to the fuel cell. The tank contains liquid water (see col. 18, line 47) and functions to wash and humidify the process air stream. The tank (252) can be drained through the bottom portion thereof (see Fig. 2). The use of the drain in combination with the water supply from tank 236 corresponds to the "means for periodically replacing the washing liquid" recited in claim 1. Although the water tank (236) does not contain "cooling water" for the fuel cell, this limitation is

recited functionally in claim 6 and is given little patentable weight. Further, the recitation in claim 7 that the means is operated “every fixed time” is also given little patentable weight because it does not limit the structure of the apparatus. Regarding claim 5, Cownden discloses a water filter (262) upstream of the tank 252, thereby rendering the water a “treated water”.

Cownden does not expressly teach that the water is replaced according to the dirtiness of the washing liquid as recited in claim 8 or that water is discharged (purged) from system as recited in claims 1 and 6.

JP ‘817 is directed to an air purification apparatus (see abstract). A water contamination detection sensor measures the contamination of the water in a tank and orders the water discharged and new water introduced when the contamination reaches a predetermined level.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the contamination sensor of JP ‘817 in the system of Cownden et al. In the abstract, JP ‘817 teaches that the control of the water replacing period is “properly” performed by this apparatus. As such, the artisan would be motivated to use the contamination sensor of JP ‘817 in the system of Cownden et al. Further, the artisan would be motivated to discharge (purge) from the system entirely the water from the tank 252 of Cownden when the water reaches a predetermined dirtiness. Since the filter (262) is upstream the tank (252), increased dirtiness in the water in the tank would indicate that the filter is no longer effective to remove accumulated contaminants and that the water should be flushed from the system. This may be accomplished by using a drain or

purge valve on the tank (252) or the other tank (236). As such, the claimed subject matter would be rendered obvious to the skilled artisan.

Response to Arguments

3. Applicant's arguments filed October 12, 2005 have been fully considered but they are not persuasive insofar as they apply to the present rejections. Applicant states that "Cownden et al. does not appear to teach or suggest that washing liquid is [dis]charged from the fuel cell apparatus." While this assertion has merit, it is believed that the disclosure of JP '817 supplies the motivation to discharge the water from the system of Cownden, thereby meeting the newly claimed limitation. As such, claims 1, 2, and 6-10 remain rejected under 35 USC 103.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1746
December 15, 2005